

<p>2001-161062/17 A97 D25 E19 (A25 D16) MIFA- 1999.07.06 MIFA FRENKENDORF AG *EP 1067176-A1 1999.07.06 1999-001241(+1999CH-001241) (2001.01.10) C11D 3/386, 3/43, 17/00, 17/04</p> <p>Anhydrous, single-phase clear detergent concentrates for manufacture of encapsulated products preferably contain ethoxylated polyethyleneglycol ether solvents to dissolve and inactivate enzyme components (Ger)</p> <p>C2001-048177 R(AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI)</p> <p>Addnl. Data: KLEELI K, PETRIELLA P 2000.06.24 2000EP-113434</p>	<p>A(10-E8A, 10-E24, 12-W5, 12-W12A, 12-W12B) D(11-A3A1, 11-A3A5, 11-D2) E(10-A9A, 10-B3B, 10-B4D, 10-E4E, 10-E4M3)</p> <p>Such concentrates overcome the difficulties associated with the products of EP339707 (delay before the encapsulated enzyme becomes active in the washing liquor and haziness of the mixture) and of US4597885 (only allows production of foam bath compositions not containing enzymes). The present concentrates are single-phase, clear yellow liquids of Brookfield viscosity 100-1,000mPa.s with the enzyme in dissolved form, the solvents used not only dissolving the enzyme but keeping it in inactive form so that the encapsulating shell is not attacked prior to use of the capsules in the washing liquor. On placing in the washing liquor, the enzyme is immediately activated and the composition gives an improved washing effect.</p> <p><u>EXAMPLE</u></p> <p>A suitable concentrate comprised (by wt.) mono-to-trialkylamine 2-4EO fatty alcohol polyethyleneglycol ether sulfate (30%), 3-11EO fatty alcohol polyethyleneglycol ether (40%), butylene glycol (20%), Savinase(TM) (protease enzyme) (4%), Na salt of a 12-22C alkylcarboxylic acid (3%), perfume (2%) and silicone anti-foam</p> <p>EP 1067176-A+</p>
<p><u>NOVELTY</u></p> <p>Anhydrous detergent concentrates consisting of liquid mixtures containing organic solvents, surfactants and enzymes are provided in the form of single-phase clear solutions.</p> <p><u>USE</u></p> <p>Use of the concentrates is claimed in filling water-soluble (especially soft gelatin or polymer) shells to give capsules.</p> <p><u>ADVANTAGE</u></p>	

<p>(0.5%).</p> <p><u>TECHNOLOGY FOCUS</u></p> <p>Organic Chemistry - Preferred Solvents: The solvents are preferably mixtures of:</p> <p>(i) 3-11 ethoxylated fatty alcohol polyethyleneglycol ethers and</p> <p>(ii) 2-4 ethoxylated fatty alcohol polyethyleneglycol ether sulfates of mono-to-tri-alkylamines or -alkanolamines.</p> <p>Preferably also present in the solvent is polyol such as propylene- or butylene-glycol or glycerol, and the mixture may also contain a Na-, K- or triethanolamine salt of a 12-22C alkylcarboxylic acid.</p> <p>(9pp1958DwgNo.0/0)</p>	<p>EP 1067176-A</p>
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